DOCUMENT RESUME

ED 411 278 TM 027 261

AUTHOR Tucker, Charlene G.; Andrada, Gilbert N.
TITLE Accountability Works: Analysis of Performance by Grade Span of School.
PUB DATE 1997-03-00
NOTE 23p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, March 24-28, 1997).
PUB TYPE Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *Accountability; Elementary Education; *Expectation; *Instructional Program Divisions; Multivariate Analysis; Public Schools; *School Organization
IDENTIFIERS *Connecticut; Grade Span Configuration

ABSTRACT

For the past decade in Connecticut, public school students have been tested in the fall of grades 4, 6, and 8, and results have been attributed to the school in which students are tested. Some Connecticut elementary schools end at grade 5 (Type I) and some continue to grade 6 or 8 (Type II). Grade 6 results are reported for Type II schools but not Type I. The relationship between this school-level accountability and the sixth-grade performance of students was examined using multivariate analysis of covariance (MANCOVA). Two different models were used to compare the sixth-grade achievement of students who attended Type I and Type II schools in grade 5, removing the effect of fourth-grade performance. Consistent results showed that schools that expected to be accountable for sixth-grade results (Type II) produced better performing sixth graders. Implications for designing and developing accountability systems are discussed. Appendixes present Title I of the Improving America's Schools Act, an overview of the Connecticut Mastery Test, a sample reporting form, and the school report form. (Contains six tables and four references.) (Author/SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Running head: ACCOUNTABILITY WORKS

ED 411 278

Accountability Works:

Analysis Of Performance By Grade Span Of School

Charlene G. Tucker

Gilbert N. Andrada

Connecticut State Department of Education

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Charlene Tucker

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Paper presentation at the Annual Meeting of the

American Education Research Association

Chicago, Illinois

March 26, 1997

TM027261

BEST COPY AVAILABLE

Abstract

For the past decade in Connecticut, public school students have been tested in the fall of grades 4, 6, and 8, and results have been attributed to the school in which students are tested. Some Connecticut elementary schools end at grade 5 (Type I) and some continue to grade 6 or 8 (Type II). Grade 6 results are reported for Type II schools, but not for Type I schools.

The relationship between this school-level accountability and the sixth-grade performance of students was examined using MANCOVA. Two different models were used to compare the sixth-grade achievement of students who attended Type I and Type II schools in grade 5, removing the effect of fourth-grade performance. Consistent results showed that schools which expected to be accountable for sixth-grade results (Type II) produced better performing sixth graders.

Implications for designing and developing accountability systems are discussed.

Accountability Works:

Analysis of Performance by Grade Span of School

We are in an age of emerging educational standards, assessments, and accountability. At the national, state, and local levels, education stakeholders are defining and developing systems that: 1) specify what students should know and be able to do; 2) assess the progress of students toward achieving those ends; and 3) provide incentives and consequences for education professionals charged with student progress. According to the May 1996 report, *The Status of State Student Assessment Programs in the United States* (CCSSO & NCREL, 1996), "States are involved not only in the revision and/or development of assessments, but also in the redefinition of curriculum frameworks and student standards. . . .When asked if they had state goals, student expectations, content standards, and/or assessment frameworks, most of the 35 states that responded reported that they had three to five of the above." The reauthorization of the Elementary and Secondary Education Act under the 1994 Improving America's School Act was a strong catalyst in this trend. Title I, while providing a great deal of flexibility at the state level, requires certain action with regard to standards and assessment. (See Appendix A for a summary of Title I requirements.)

One of the primary purposes of a state assessment program is to create an accountability system for the state's schools. An accountability system serves to both inform the public of the schools' performance and to create an incentive for schools to perform well. Does this type of accountability actually make a difference in the behavior of educators or in the policies of educational systems? Is there actually a corresponding improvement in the achievement of students? A unique set of circumstances in

Connecticut at this time allows a glimpse into the effect of more than a decade of a relatively high stakes school-level accountability system.

Since the fall of 1985, Connecticut's state assessment, the Connecticut Mastery Test (CMT), has been the primary indicator of the educational achievement of Connecticut's students. All public school students (unless exempted through provisions made for special education or bilingual education students) have been assessed in the fall of grades four, six, and eight for more than a decade. (See Appendix B for an overview of the CMT program.) Performance of students in three subject areas (reading, writing, and mathematics) has been measured annually against state standards. Results have been reported at the state, school district, school building, and individual student level. Critical to this study is the fact that school level results have historically been attributed to the school in which the test was administered.

Over the years, CMT results have become increasingly public, and the stakes associated with them have risen. CMT results are shared with local school boards and parent groups; they are the subject of newspaper headlines; they are published in school profiles which reside in public libraries throughout the state; they have an impact on state education funding; they sometimes determine superintendent salaries; they affect real estate values. As one school administrator said after test results were released, "We live and die by these test results, and we just died."

Grade configurations of Connecticut's elementary and middle schools vary among school districts. The most common configurations are: K-5 and 6-8, or K-6 and 7-8, or K-8 (CSBE, 1994). In the past ten years, only fourth grade results have been reported in association with schools with K-5 grade spans. Likewise, sixth grade results have been

reported at the 6-8 school even though the students were new to that school at the time of the fall test administration. This meant that, for a K-5 school, there was no direct accountability for the sixth-grade performance of its alumni. In school districts where several K-5 schools feed into a single 6-8 school, this reporting pattern did not reveal which K-5 schools were responsible for the success or failure of their sixth-grade alumni. See Appendix C for an example of how CMT data have been reported in a school profile for one actual Connecticut K-5 school, referred to as School A.

When the Improving America's Schools Act (1994) was reauthorized, school-level accountability became more critical for Title I schools. A new procedure was initiated in which fall testtakers were required to indicate where they attended school during the previous school year. A new Title I report includes results aggregated by previous-year school. That is, the new report for School A (shown in Appendix D) gives not only fourth grade results, but also the sixth grade results of the School A alumni.

This sudden change offered an opportunity to study one aspect of the impact of a well-institutionalized assessment program. For more than a decade, School A (K-5 school) has been publicly accountable for the performance of students in the fall of fourth grade, but not for the performance of students in the fall of sixth grade. If accountability actually makes a difference in the behavior of educators or in the policies of educational systems, there should be a corresponding difference in the achievement of students. This study examines the difference between the sixth-grade performance of students who attended fourth and fifth grade at schools that have historically been credited with sixth grade performance and those that have not.

DESIGN AND METHODOLOGY

The primary statistical methodology employed in this study was a multivariate analysis of variance with a covariate (MANCOVA). The effect of one independent variable (schooltype) on three dependent variables (6th grade reading, writing, and mathematics scores) was studied after removing the effect of a covariate (4th grade achievement level).

Null hypothesis: The progress of students in fourth and fifth grades in schools that are held accountable for test results in the fall of sixth grade is not significantly different from the progress of students in schools that are not accountable for sixth grade results.

Unit of Analysis: School buildings were the unit of analysis for this study. We did not assume that the progress of students was directly affected by the scheduling of an assessment. Rather, we assumed that accountability influenced the policies and behavior of educators in schools with a resulting effect on student performance on the CMT.

Independent Variable: Using existing data, two groups of schools were identified based on their grade configurations. Both groups consist of schools with grades four and five and have historically been associated with fourth grade test results. However, one of the groups (Type I) contains schools that do not have a grade six and, therefore, have **not** been associated with sixth-grade results. The other group of schools (Type II) contain grade six and have been associated with sixth-grade results. The students used in this study are those who attended fifth grade in 1994-95 and, in most cases, fourth grade in 1993-94 in these types of schools. Table 1 summarizes the criteria used to select the 315 Type I schools and the 200 Type II schools.

Table 1
Criteria Used to Select Type I and Type II Schools

School Type	Number of Schools	Which Grade Levels? 4	5	6	Received CMT Results? 4	6	Examples of Grade Spans
Type I	315	yes	yes	no	yes	no	K-5, 3-5
Type II	200	yes	yes	yes	yes	yes	4-8, K-6

Dependent Variables: Mean student scores on the sixth-grade Connecticut Mastery Test in reading, writing, and mathematics in the fall of 1995 were used as the dependent variables for all schools (both Type I and Type II). Most of the students who attended Type II schools as fifth graders in 1994-95 were tested in the fall of sixth grade at the same school. Those students who attended Type I schools as fifth graders in 1994-95 were definitely tested at a different school in sixth grade.

In order to prepare data for MANCOVA, two transformations were necessary. Distributions of CMT scores in the three subject areas were examined to determine whether they adequately met the assumption of a normal distribution. An examination of skewness and kurtosis indicators, and the general appearance of the distributions showed that the distributions in reading and in writing were approximately normal. The distribution of mathematics scores was very negatively skewed. The mathematics scores (X) were transformed exponentially (X^3 for sixth grade and X^5 for fourth grade) in order to eliminate the skewness and create a more balanced distribution. However, correcting the skewness affected the kurtosis by flattening the distribution somewhat.

Another transformation of the 1995 CMT raw scores was necessary. Across subject areas, the reporting scales for test results vary tremendously. Also, even when reporting scales are the same across grade levels, distributions vary somewhat. For example, even

BEST COPY AVAILABLE

though the reporting scales are the same, reading scores are systematically higher in sixth grade than in fourth grade. These differences could make the results of this study difficult to interpret. Therefore, all raw scores were converted to z-scores. Scores were standardized based on the distribution of all valid scores for the particular subject area in the particular grade level and year of administration. That is, the 1995 sixth grade reading scores were standardized based on the mean and standard deviation of all valid sixth grade reading scores in 1995.

Covariate: Because this study attempted to isolate the progress made in fourth and fifth grades (i.e., between testing points in the fall of fourth grade and the fall of sixth grade), it was important to eliminate the differences that already existed among the groups of students in each type of school in the fall of grade four. Fourth-grade test results in reading, writing, and mathematics were available to be used as covariates. However, because these three indicators were highly correlated, it would have been ill-advised to use all three as covariates (Tabachnick & Fidell, 1989, p. 323). Each of the three standardized scores as well as the mean of the three was examined as a potential covariate. The decision was made to use the mean of the three z-scores because it was the most normally distributed and was highly correlated with each of the dependent variables, r=.92 in reading, r=.69 in writing, and r=.92 in mathematics. The mean of the three fourth-grade z-scores will be referred to as "PRETEST."

Two Analyses: Two distinct analyses were employed in this study, each with its own set of limitations and competing explanations. Approaching the problem from two different perspectives was our attempt to address competing explanations and establish a stronger case through the consistency of results. The two analyses are briefly described below:

1. Analysis #1 used a longitudinal design matching student-to-student the 1993 fourth-grade performance with the 1995 sixth-grade performance. The disadvantage of this design is that a substantial and unrepresentative segment of the population was lost.
2. Analysis #2 used a cross-sectional design with the 1995 fourth graders' performance as the covariate for the performance of the 1995 sixth graders. This analysis had the advantage of complete groups, but it had the disadvantage of using different cohorts of students.

In both analyses, a MANCOVA using fourth-grade achievement as a covariate was conducted using the Statistical Package for the Social Sciences (SPSS). Simple contrasts were used to compare the sixth grade performance of Type II schools to the reference group, Type I schools, after accounting for the fourth-grade covariate. Because cell sizes were not equal , the SPSS model for calculating the sum of squares that is "invariant with respect to the cell frequencies" was utilized (SPSS Inc, 1996, p. 23).

ANALYSES AND RESULTS

Analysis #1

In this analysis, 1993 CMT results and 1995 CMT results were matched for students in Type I and Type II schools. The three dependent variables were school means of standardized 1995 sixth grade CMT results. The covariate, PRETEST, was derived from the 1993 CMT results for the same students. PRETEST is the mean of the three standardized 1993 fourth grade CMT scores. The independent variable, SCHTYPE is the classification of the 1994-95 school according to its grade configuration. SCHTYPE =1 for schools with no sixth grade who, therefore, historically have not been accountable for sixth grade results. SCHTYPE=2 for schools with sixth grade who historically have been held accountable for sixth grade results.

The students used to calculate these means all: 1) have valid 1995 sixth-grade CMT results in all subject areas; 2) have valid 1993 fourth-grade CMT results in all subject areas; 3) were positively matched between the 1993 and 1995 data files based on a composite identification field (name, birthdate, and gender as coded by students on answer booklet); and 4) attended a Type I or Type II school in 1994-95 that had at least twenty sets of matched valid scores. A substantial segment of the student population was lost. Excluded students were not representative of the whole population and tended to be the lower performing students. The excluded students may be: 1) those who were retained in grade; 2) those who improperly filled in the demographic information; 3) those with any invalid subtest; or 4) those who are more mobile. School means were calculated based on the remaining sample of 14,434 (77.5%) students from Type I

schools and 8,064 (72.6%) students from Type II schools. Table 2 shows the extent to which students were eliminated from this analysis for various reasons.

Table 2
Students Eliminated from Analysis #1

	School Type I		School Type II	
	Number	Percentage	Number	Percentage
1995 Grade 6 Test Takers	19,023	100%	11,111	100%
Portion of Above with 1993 Match	15,417	81.0%	8,778	79.0%
Portion of Above with All Valid Tests	14,743	77.5%	8,364	75.3%
Portion in Schools with ≥ 20 Matched Scores	14,434	75.9%	8,064	72.6%

The number of Type I and Type II schools differed as well as their initial mean achievement level. There were more Type I schools and their initial achievement level was higher. Table 3 summarizes the 1993 initial grade four school-level z-scores in each subject area as well as on the variable, PRETEST.

Table 3
Initial Grade 4 Achievement Level of Schools in Analysis #1

School Type	# of Schools	1993 Grade Four Standardized School Means			Covariate
		Reading	Writing	Mathematics	PRETEST
Type I	295	.092	.094	.123	.103
Type II	177	-.044	-.050	-.027	-.041

Using PRETEST as the covariate to equalize the initial achievement level, the relationship between SCHTYPE and the dependent variables (1995 CMT reading, writing, and mathematics) was analyzed using a multivariate analysis of covariance (MANCOVA). Using Wilks' criterion, the combined dependent variables were significantly affected by the independent variable, SCHTYPE, $F(3,467) = 12.99$, $p<.001$. The multivariate effect size ($\eta^2=.077$) indicates that 7.7 percent of the variance in sixth-

BEST COPY AVAILABLE

grade performance is explained by the type of school attended in grades four and five. As displayed in Table 4, Bonferroni confidence intervals (95%) show that, in all cases, the difference (SCHTYPE II - SCHTYPE I) is positive after adjusting for PRETEST. This indicates that schools that were held accountable for the sixth-grade results of their fourth and fifth graders made more progress in all subjects than schools that were not held accountable for sixth-grade results.

Table 4
Differences in Mean Z-Scores (Type II - Type I)
Adjusted for Effect of Grade Four Achievement Level

Subject	Coefficient	Standard Error	.95 Bonferroni Confidence Interval
Reading	.072	.017	.040 - .105
Writing	.162	.031	.101 - .224
Mathematics	.074	.019	.035 - .113

Analysis #2

In this cross-sectional analysis, 1993 and 1995 CMT results were not matched for the same students. Rather, both fourth-grade and sixth-grade scores were drawn from the 1995 CMT administration. The fourth-grade cohort was used as the covariate for the sixth-grade cohort. This design has the disadvantage of using unmatched groups of students, confounding the results to the extent that these cohorts of students differ from each other.

The advantage of this design is that the unrepresentative 25.3% of the students excluded from the longitudinal analysis (described in Table 2) were included. Analysis #2 was based on 469 of the 472 schools that were included in Analysis #1. Three schools were lost due to changes in the grade configurations of the schools. However, a much more complete group of students was used to derive the school means. Since this design

BEST COPY AVAILABLE

did not require matching between the 1993 and 1995 data files, it was not necessary that the students had every subtest valid nor that they had a matching composite ID. For example, every student with a valid mathematics score was included in the calculation of the school's standardized mathematics score even if no valid reading or writing score was available for that student. Because students who tend to score lower were not systematically removed from this analysis, the sample size was greater and the initial achievement level was slightly lower than the 1993 comparison group in the previous analysis. Table 5 shows the numbers of sixth-grade students contributing to the school means and compares the groups used to calculate the covariate, PRETEST, in the two analyses.

Table 5
Students Used to Derive School Means For Analyses 1 & 2

Type of School	Analysis #1			Analysis #2				
	# Schools	# Students Grade 6	PRETEST Grade 4	# Schools	# Students Grade 6			PRETEST Grade 4
					Read	Write	Math	
Type I	295	14,434	.103	295	18,331	18,247	18,303	.039
Type II	177	8,064	-.041	174	10,541	10,508	10,517	-.131

Using 1995 fourth grade CMT as the covariate (PRETEST) to equalize the initial achievement level, the relationship between SCHTYPE and the dependent variables (1995 reading, writing, and mathematics) was analyzed using a multivariate analysis of covariance (MANCOVA). Using Wilks' criterion, the combined dependent variables were significantly affected by the independent variable, SCHTYPE, $F(3,464) = 14.32$, $p<.001$. The multivariate effect size ($\eta^2=.085$) indicates that 8.5 percent of the variance in sixth-grade performance is explained by the type of school attended in grades four and five. As displayed in Table 6, Bonferroni confidence intervals (95%) show that,

in all cases, the difference (Type II - Type I) was positive after adjusting for PRETEST (1995 fourth graders). This indicates that schools that knew they would be held accountable for the sixth-grade results of their fourth and fifth graders made more progress than schools that did not expect to be held accountable for sixth-grade results.

Table 6
Differences in Mean Z-Scores (Type II - Type I)
Adjusted for Effect of Grade Four Achievement Level

Subject	Coefficient	Standard Error	.95 Bonferroni Confidence Interval
Reading	.105	.023	.059 - .150
Writing	.189	.032	.127 - .251
Mathematics	.102	.025	.054 - .151

DISCUSSION AND IMPLICATIONS OF FINDINGS

The growth of students through grades four and five in schools that have historically been accountable for sixth grade results (Type II) and those that have not (Type I) were examined. Two different methods were used to account for the initial achievement of the two groups. In Analysis #1, students' fourth-grade and sixth-grade performance were matched; this analysis had the advantage of matched students but the disadvantage of an unrepresentative sample. In Analysis #2, a different cohort of fourth grade students was used as the covariate for the sixth-grade cohort; this analysis has the advantage of a more complete group of students but the disadvantage of a possible cohort effect.

Each analysis showed a statistically significant multivariate effect as well as significant univariate effects for each subject area. In both cases, the sixth-grade school level results for the Type II schools were better than those of the Type I schools when the initial fourth grade achievement level was taken into consideration. The two analyses

taken together rule out the confounding arguments of unrepresentative samples and cohort effect. The consistency of results across the two analyses builds confidence in the demonstrated effect.

This study has implications for those who are designing and developing accountability systems. First, it offers encouragement that the accountability system will actually make a difference. Also, it implies that design decisions made during development and the details of implementation make a difference. Reporting and test scheduling should be thought through carefully. Methods for disseminating information at both the state and local levels should be planned carefully to optimize the impact. Consequences and recognition attached to assessment results should be carefully placed. Any potential gaps in accountability should be identified and policies should be in place to minimize their effect.

Limitations

This study is based on the performance of a particular group of Connecticut students on a particular Connecticut test. It is possible that a different story would emerge if it were based on the performance of students in a different part of the country on a different instrument. It is even possible, although statistically unlikely, that a different pattern would be detected with another cohort of Connecticut students. The generalizability of this study is dependent on a belief that it is tapping into an underlying human and institutional phenomenon about motivation, incentives, and priorities.

A more serious limitation of the study is that it contains a logical gap. It assumes that accountability is having an effect on the policies of educational institutions and on the behavior of educators. In turn, the improvement in student performance is attributed

to the resulting difference in the educational experiences. This study did not actually provide any evidence of the intermediate effect. There are several possible explanations that were not explored:

1. In Type I situations, the testing school has less incentive. Who is going to credit them with the performance of students they just received? Perhaps, this incentive has an impact on the extent of content review, the way in which students are prepared for the test, or the way in which the test is administered.
2. In Type I situations, the K-5 sending school has less incentive than in Type II situations. Only the fourth-grade performance is directly associated with the school, not sixth-grade performance. Perhaps, this has an impact on a principal's priorities and, in turn, on the principal's influence on teachers. Perhaps, it impacts professional development choices for teachers. Perhaps, it influences curricular and budget priorities.
3. This achievement pattern could be related to the ways in which information about the testing program is disseminated or promoted. Perhaps, through state-level or local-level policies, information is not reaching all the appropriate grade levels in the Type I situation. How familiar are the fourth-grade and fifth-grade teachers in a K-5 school with the content and scoring procedures of the sixth grade test?

Implications for Further Research

The first step would be to replicate this study with the next year's data. Beyond one more year, the window of opportunity will be closed because the new Title I reporting will begin to become institutionalized. This follow-up study should not only look for the same effect, but also look for a high correlation of school-level results for the two years.

If this achievement pattern is truly related to school-level policies and practices, the individual schools should be showing the same pattern over the two years.

The next step would be to choose a sample of Type I schools showing a decline from fourth to sixth grade over both years and a second sample of Type I and Type II schools not showing the drop. A qualitative research study to investigate the policies and practices that may be possible explanations for the patterns would then be interesting.

Appendix A

Title I Requirements for Standards and Assessment

IMPROVING AMERICA'S SCHOOLS ACT OF 1993

1. HIGH STANDARDS FOR ALL CHILDREN--WITH THE ELEMENTS OF EDUCATION ALIGNED, SO THAT EVERYTHING IS WORKING TOGETHER TO HELP ALL STUDENTS REACH THOSE STANDARDS.

State Plans--SEC. 1111

1. States will submit plans containing high quality content and performance standards.

   a. Content standards will clearly articulate what all children should know and be able to do in the core academic subjects.

   b. Performance standards will be aligned with content standards and determine how well students are learning the topics and skills outlined in the content standards.

      (1.) Performance standards will include two high levels of performance--proficient and advanced, and a third benchmark measuring progress toward proficiency.

   c. If a state has not adopted standards in all of its core academic subjects, the plan shall include standards in those subjects that it has adopted, which must include at least mathematics and reading/language arts, and add other standards as it adopts them.

2. State plans will define what constitutes adequate yearly progress for schools and LEAs toward meeting the proficient and advanced performance standards.

3. State plans will describe the annual student assessments that will determine yearly progress made by the LEAs and the schools in meeting the state's performance standards. These assessments shall--

   a. be aligned with the content and performance standards;

   b. be valid, reliable, and consistent with relevant, nationally recognized, professional and technical standards of assessment;

   c. be comprised of multiple, up-to-date measures of student performance;

   d. include children with disabilities and limited English proficiency;

   e. provide individual student scores; and

   f. provide for disaggregated results for educationally meaningful categories of children.

BEST COPY AVAILABLE

Appendix B

Overview of CMT Program

Connecticut Mastery Test
(Grades 4, 6 and 8)

Areas Tested	Grades	Current Testing Time (Minutes)	Description	Item Type
READING	4 6 8	70 75 70	Degrees of Reading Power	Choose correct word(s) for those omitted in paragraph(s). • multiple choice
	4 6 8	70 70 70	Comprehension	Answer questions after reading passages/short stories. • multiple choice • in writing
WRITING	4 6 8	60 60 60	Conventions of Writing (Mechanics)	Editing, punctuation, grammar, sentence structure and spelling • multiple choice
	4 6 8	45 45 45	Response to Prompt	Read a prompt and respond • writing sample
LISTENING	4 6 8	45 45 45	Listening Tapes	Take notes. Answer questions after listening to tapes. • multiple choice • in writing
MATH	4 6 8	120 180 180	Computation, Applications and Problem Solving	• multiple choice • grid in • answer questions in writing

Sample CMT Reporting on School Profile for School A

STUDENT PERFORMANCE

Student performance includes skills measured on the Connecticut Mastery Tests and other parts of the Common Core of Learning, such as attendance and physical fitness.

Connecticut Mastery Test Results: Grade 4
Second Generation

		READING			WRITING			MATHEMATICS		
	Year	School	District	State	School	District	State	School	District	State
Percentage of	1997									
Students	1996									
At or Above	1995									
State Goal*	1994	51.2	37.2	45.0	46.3	34.1	39.7	82.9	58.7	56.8
	1993	43.9	34.6	44.6	11.6	22.5	32.0	53.5	42.8	53.3
	1997									
Average	1996									
Score	1995									
	1994	51	45	47	6.9	6.6	6.8	108.4	101.1	99.3
	1993	46	44	46	5.6	6.0	6.5	96.0	93.8	97.7

Connecticut Mastery Test Results: Grade 6
Second Generation

		READING			WRITING			MATHEMATICS		
	Year	School	District	State	School	District	State	School	District	State
Percentage of	1997									
Students	1996									
At or Above	1995									
State Goal*	1994									
	1993									
	1997									
Average	1996									
Score	1995									
	1994									
	1993									

The Connecticut Mastery Test measures essential reading, writing and mathematics skills that can reasonably be expected to be mastered by most students by the beginning of grades four, six and eight. The specific skills to be tested were identified by educators from across the state. The mathematics test assesses conceptual understanding, computational skills, problem solving/applications and measurement/geometry with some beginning algebra in Grade 8. The reading test measures students' ability to understand nonfiction English prose at different levels of reading ability. In writing, students provide a written response to a given topic to determine how well they can communicate in writing.

* The goals for each content area were established by educators and approved by the State Board of Education in order to define a reasonably demanding performance level toward which all students should strive. Students who score at or above the state goal have shown excellent performance and possess the knowledge, ability, and skill necessary to successfully perform the tasks and assignments appropriately expected of a student with minimal teacher assistance.

BEST COPY AVAILABLE

Appendix D

Title I Report for School A

Connecticut State Department of Education
1994-95 Title I Report of Annual Progress
SCHOOL REPORT: CMT

District: School A
School:

*1994 results are for students who attended this school in 1993-94.
1995 results are for students who attended this school in 1994-95.

Overall School Index:

1994	1995	Change
69.6	71.9	2.3

Recommendation for Improvement:

This school has scored in the Level 2 range and has successfully met the target gain of +1.0. However, since the school was identified for improvement for at least two years under the Chapter 1 NCE gain model, it remains recommended for improvement. It will continue in that status until Title I standards are met for 2 out of 3 consecutive years. You may discuss this recommendation with your Title I consultant.

The index in this report ranges from 0 to 100 and takes into account the percentage of students scoring at or above state goals as well as the percentage of students scoring above additional progress points. The calculation is described on reverse side.

Reading:	1994 Index	1995 Index	Change	Number of Valid Scores 94	Number of Valid Scores 95
Grade 4	70.5	82.1	11.6	39	39
Grade 6	61.1	66.2	5.1	36	34
Writing:					
Grade 4	68.0	82.1	14.1	39	39
Grade 6	54.2	36.8	-17.4	36	34
Mathematics:					
Grade 4	93.2	92.3	-0.9	39	39
Grade 6	68.5	65.7	-2.8	36	33

Disaggregation: The index is not reported where the number of valid scores is less than 10 for a particular group.

	1994 Index	1995 Index	Change	Number of Valid Scores 94	Number of Valid Scores 95
Black	46.6	44.6	-2.0	[illegible]	[illegible]
Hispanic					
White	82.6	86.7	3.9	[illegible]	[illegible]
Other					
Male	72.2	72.5	0.3	36	37
Female	67.1	71.3	4.2	39	35
Disabled					
Not Disabled					
Migrant					
Not Migrant					
ELL**					
Not ELL					
F/R Lunch	43.5	29.3	-14.2	18	18
Full Price	77.8	85.9	8.1	57	54

* All students are included in the above analyses regardless of Title 1 participation or length of enrollment in the school.
**ELL: English Language Learner (enrolled in ESL or bilingual education program)

BEST COPY AVAILABLE

References

Connecticut State Board of Education (CSBE) (1994). Connecticut Education Directory 1994-95. Hartford, CT: Connecticut State Board of Education.

Council of Chief State School Officers (CCSSO) & North Central Regional Educational Laboratory (NCREL). (1996). The Status of State Student Assessment Programs in the United States. (Contract No. RJ96006301). Office of Educational Research and Improvement, Washington, DC.

SPSS Inc. (1996). SPSS Advanced Statistics 7.0 Update. Chicago, IL: SPSS Inc.

Tabachnick, B. G., & Fidell, L. S. (1989). Using Multivariate Statistics (2nd ed.). New York, NY: Harper Collins.